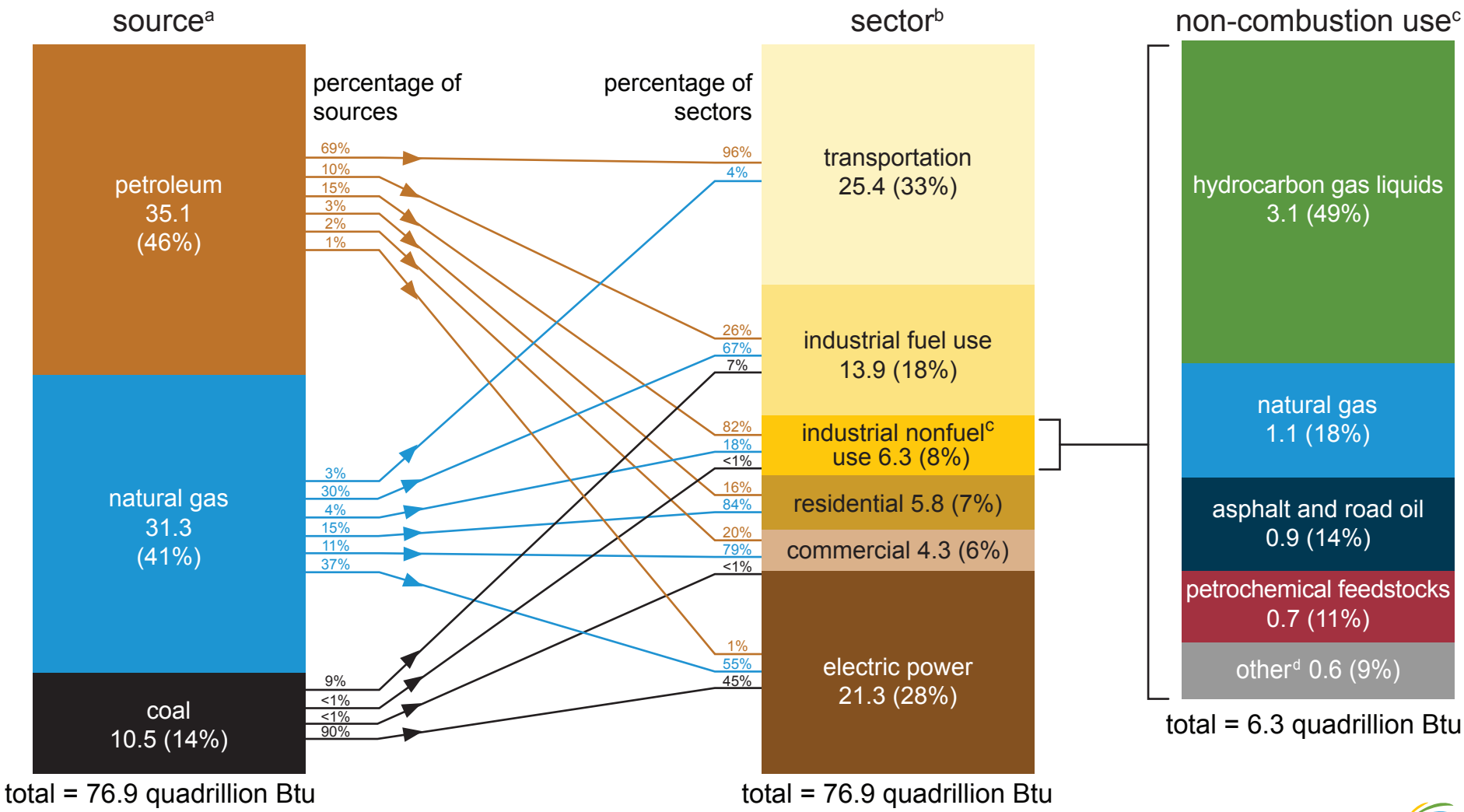
U.S. fossil fuel consumption by source and sector, 2021

quadrillion British thermal units (Btu)



Sources: U.S. Energy Information Administration (EIA), *Monthly Energy Review* (April 2022), Tables 1.3, 1.11b, and 2.2—2.6.

Note: Sum of components may not equal total due to independent rounding. See "Extended Chart Notes" on next page.

[a] Each energy source is measured in different physical units and converted to common British thermal units (Btu). See EIA's *Monthly Energy Review* (MER), Appendix A.

[b] Industrial, commercial, and electric power sectors include primary energy consumption by combined-heat-and-power (CHP) and electricity-only plants in the sector. Energy consumed by these plants reflects the approximate heat rates for electricity in MER Appendix A.

[c] Fossil fuels not burned to release energy and instead used directly as construction materials, chemical feedstocks, lubricants, solvents, and other products. Includes the 0.1 quadrillion Btu of lubricants consumed in the transportation sector for non-combustion use not shown separately in the chart. See Note 2 "Non-combustion use of fossil fuels" at the end of MER Section 1.

d Includes coal and other petroleum products such as lubricants, distillate fuel oil, residual fuel oil, waxes, special naphthas, petroleum coke, and miscellaneous products.

Extended Chart Notes

The U.S. Energy Information Administration (EIA) *U.S. fossil fuel consumption by source and sector* chart illustrates fossil fuel consumption and fossil fuels used for non-combustion (nonfuel, non-energy) purposes in the United States. The data are from EIA's *Monthly Energy Review* (MER). The chart does not show energy production, nor the losses associated with energy production.

Source:

Fossil fuel energy sources are measured in different physical units: liquid fuels in barrels or gallons, natural gas in cubic feet, and coal in short tons. EIA converts each source into common British thermal units (Btu) to allow comparison among different types of energy. Each source has a different Btu conversion rate. See MER Appendix A for further explanation.

Petroleum: Includes petroleum products obtained from processing crude oil, natural gas, and other hydrocarbon compounds. Petroleum products include: motor gasoline, distillate fuel oil, jet fuel, hydrocarbon gas liquids (HGL), asphalt and road oil, aviation gasoline, lubricants, kerosene, petroleum coke, petrochemical feedstocks, residual fuel oil, still gas (refinery gas), special naphthas, naphtha-type jet fuel, waxes, unfinished oils, and other miscellaneous products. Excludes biofuels.

Natural gas: A gaseous mixture of hydrocarbon compounds, primarily methane, formed deep beneath the earth's surface over millions of years from the remains of plants and animals, chemicals, heat, and pressure. Excludes supplemental gaseous fuels.

Coal: A combustible black or brownish-black sedimentary rock with a high amount of carbon and hydrocarbons formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. Includes a relatively small amount of coal coke net imports.

Sector:

Industrial: Includes energy consumed for manufacturing (NAICS codes 31-33); agriculture, forestry, fishing, and hunting (NAICS code 11); mining, including oil and natural gas extraction (NAICS code 21); construction (NAICS code 23); and combined-heat-and-power (CHP) generators that produce electricity or useful thermal output primarily to support the above-mentioned industrial activities.

Transportation: Includes energy used by automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles whose primary purpose is transporting people or goods from one location to another. Vehicles whose primary purpose is not transportation (that is construction cranes and bulldozers, farming vehicles, and warehouse forklifts) are classified in the sector of their primary use. Also includes natural gas used in the operation of natural gas pipelines.

Residential: Includes energy used for space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances in the living quarters of private households.

Commercial: Includes energy consumed by businesses; federal, state, and local governments; other private and public organizations, such as religious, social, or fraternal groups; institutional living quarters; sewage treatment facilities; and CHP generators that produce electricity or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

Electric power sector: An energy-consuming sector that consists of electricity only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public—that is NAICS code 22 plants. Electricity retail sales are the amount of electricity sold to customers purchasing electricity for their own use and not for resale.

Non-combustion use of fossil fuels:

Although most fossil fuels consumed in the United States are combusted (burned) to produce heat and power, some are instead used directly for non-combustion (nonfuel, non-energy) purposes, such as construction materials, chemical feedstocks, lubricants, solvents, and waxes. For example, coal tars from coal coke manufacturing are used as feedstock in the chemical industry, for metallurgical work, and in anti-dandruff shampoos. Natural gas is used to make nitrogenous fertilizers and as chemical feedstocks. Asphalt and road oil are used for roofing and paving. Hydrocarbon gas liquids are used to create intermediate products to make plastics. Lubricants, including motor oil and greases, are used in vehicles and various industrial processes. Petrochemical feedstocks are used to make plastics, synthetic fabrics, and related products. See the endnotes of MER Section 1 for further explanation and examples.